

Reply to Office Action of May 19, 2006

REMARKS

Claims 1-21 are pending in the application. Claim 20 has been withdrawn as directed to a non-elected invention. Claims 1-19 and 21 have been rejected. Applicants respectfully request reconsideration of the application in view of the following remarks.

Applicants affirm the election of the invention in Group I (Claims 1-19 and 21).

Claims 1-19 and 21 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,293,479 (Quintero et al.) in view of U.S. Patent No. 5,175,795 (Tsuda et al.). Applicants respectfully traverse this rejection and request reconsideration because nothing in Quintero et al. or Tsuda et al., taken alone, or in combination, teaches or suggests the claimed combination of elements recited in the rejected claims.

Quintero et al. is directed to a design tool that allows designers to organize and to spatially assemble interconnectable components to form products for manufacture. Quintero et al. discloses the use of a rule base containing rules used in the design process to inform a designer of legal or improper arrangement of components. As noted in the Office Action, Quintero et al. discloses a design system that requires a user to construct a product from a basic component known as a "frame" for which other components are to be connected. Office Action at 4. As readily apparent, the disclosed "frame" is a physical object forming part of the construction of the product under design. The disclosed "frame" is not the representative data construct "frame" referenced in the claims.

Indeed, the Office Action admits that Quintero et al. fails to disclose the use of such a "frame" or "frame engine," as required in the claims. Office Action at 4. The

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Office Action, however, relies on Tsuda et al. for its teaching of a “frame engine” as “an analogous piece of software or program functions.” Office Action at 4. The Office Action concludes that it would have been obvious to combine the teachings of Quintero et al. and Tsuda et al.

The sole motivation or suggestion cited in the Office Action for making this combination is that it “would have been [sic] to execute procedures to predict performance value of product.” Even if it is assumed arguendo that Tsuda et al. properly discloses the use of a “frame-engine” as claimed, an issue Applicants do not concede, the rejection nevertheless is improper. In particular, the Office Action fails to show why one of ordinary skill in the art would be compelled to modify Quintero et al. on this basis given the fact that Quintero et al. already has this same capability. Moreover, nothing in the record is identified as the source of this motivation. This alleged motivation or suggestion is nothing more than a conclusory statement divorced from of any rationale of record, and thus, cannot be the basis for a finding of obviousness under 35 U.S.C. § 103.

The factual inquiry whether to combine references under § 103 “must be based on objective evidence of record.” In re Lee, 149 F.3d 1350, 1343 (Fed. Cir. 2002). In Lee, for example, the Federal Circuit chastised the examiner and the Board for citing mere conclusory statements (similar to those cited in the Office Action in the instant case) as the basis for concluding that a claimed invention was obvious:

[N]either the examiner nor the Board adequately supported the selection and combination of the Nortrup and Thunderchopper references to render obvious that which Lee described. The examiner's conclusory statements that “the demonstration mode is just a programmable feature which can be used in many different device[s] for providing automatic introduction by adding the proper programming software” and that “another motivation would be that the automatic demonstration mode is user friendly

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and it functions as a tutorial” do not adequately address the issue of motivation to combine. This factual question of motivation is material to patentability, and could not be resolved on subjective belief and unknown authority. It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to “[use] that which the inventor taught against its teacher.” W.L. Gore v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed.Cir.1983). Thus the Board must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency's conclusion.

Id. at 1343-1344. The Federal Circuit simply stated: “The board cannot rely on conclusory statements when dealing with particular combinations of prior art and specific claims, but must set forth the rationale on which it relies.” Id. at 1345. The Office Action in this case fails to do so.¹

As the Office Action has already admitted that Quintero et al. does not itself disclose the use of the claimed “frame engine,” without proper motivation or suggestion to combine with Tsuda et al., the rejection of independent claims 1, 11 and 17 cannot stand. For this reason alone, Applicants respectfully traverse the rejection of these claims and request that the rejection be withdrawn.

Dependent claims 2-10, 12-16 and 18, 19 and 21 all depend (directly or indirectly) from independent claims 1, 11 and 17. As these dependent claims all incorporate the limitations of their base claims, the rejection of these dependent claims should also be withdrawn for at least the same reasons given above with respect to claims 1, 11 and 17.

¹ Applicants respectfully submit that any attempt to cure the deficiencies in this rejection must be made in a non-final Office Action so that Applicants will have a full and fair opportunity to address the issues prior to appeal.

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Other limitations present in the dependent claims provide separate bases for patentability. The use of “rule-based inferences” introduced in claims 3, 4, 14 and 19, for example, patentably distinguishes the claims over Quintero et al. or Tsuda et al., taken alone, or in combination. The citation to the use of “rules” in Quintero et al. with respect to these claims becomes irrelevant after modification of Quintero et al. in view of Tsuda et al. Even if it were assumed that the teachings of a “frame-engine” of Tsuda et al. could somehow be properly applied to Quintero et al., the resulting system would have the “rule-based engine” of Quintero et al. replaced by the “frame-engine” of Tsuda et al. Nothing in the combined teachings would suggest that the “rule-based engine” of Quintero et al. could be used together with a “frame-engine,” as required in Applicants’ invention of claims 3, 4, 14 and 19. For this reason alone, the rejection of claims 3, 4, 14 and 19 should be reconsidered and withdrawn.

In addition, nothing in Quintero et al. or Tsuda et al., taken alone, or in combination, discloses or suggests the use of a frame engine that “represents data concerning configuration in a hierarchical structure, with frames corresponding to configuration categories, wherein the frames act as nodes of the hierarchical structure containing a collection of slots corresponding to configuration features and options,” as recited in claim 5 (and similarly in claim 18). The citation in the Office Action to the use of a “hierarchy” in Quintero et al. with respect to these claims becomes irrelevant after modification of Quintero et al. in view of Tsuda et al. Nothing in the combined teachings indicates that the data infrastructure (e.g., “hierarchy”) required for use in a “rule-based” system of Quintero et al. would be maintained after replacement with the “frame-engine” of Tsuda et al. For this reason alone, the rejection of claims 5 and 18 should be reconsidered and withdrawn.

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In view of the foregoing, Applicants respectfully traverse the rejection of claims 1-19 and 21 and request reconsideration thereof. Applicants respectfully submit that claims 1-19 and 21 are patentable over the prior art and earnestly solicit the allowance of this application with such claims.

Applicants hereby petition for any extension of time which may be necessary to have this Response considered. Applicants hereby authorize the Director to debit Account No. 04-1073 (under Order No. E0710.0000/P001-A) for any fees deemed necessary for that purpose.

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Respectfully submitted,

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